UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/676,737	09/30/2003	Gilbert Neiger	42P9768C	7965

			EXAMINER
7590	04/29/2005		ELMORE, REBA I

Marina Portnova
BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP
Seventh Floor
12400 Wilshire Boulevard
Los Angeles, CA 90025

ART UNIT	PAPER NUMBER
2187	

DATE MAILED: 04/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	**Applicant(s)**
Office Action Summary	10/676,737	NEIGER ET AL.
	Examiner	**Art Unit**	
	Reba I. Elmore	2187	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 September 2003*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date <u>9/30/03; 1/20/04;</u> . 3/11/04 , 11/3/03 , 11/8/04

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____ .

DETAILED ACTION

1.   Claims 1-30 are presented for examination.

Specification

2.   The abstract of the disclosure is objected to because the abstract is written as one long

sentence instead of clearly and concisely describing the present invention in several sentences.

Correction is required. See MPEP § 608.01(b).

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a

separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed

150 words in length since the space provided for the abstract on the computer tape used by the

printer is limited. The form and legal phraseology often used in patent claims, such as "means"

and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist

readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the

title. It should avoid using phrases which can be implied, such as, "The disclosure concerns,"

"The disclosure defined by this invention," "The disclosure describes," etc.

3.   The specification has not been checked to the extent necessary to determine the presence

of all possible minor errors. Applicant's cooperation is requested in correcting any errors of

which applicant may become aware in the specification.

Double Patenting

4.   The nonstatutory double patenting rejection is based on a judicially created doctrine

grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or

improper timewise extension of the "right to exclude" granted by a patent and to prevent possible

harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed.

Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686

F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel,* 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

10/676737	*09/752587*
Claim 1. A method comprising:	Claim 1. A method comprising:
allocating a second address space for a virtual machine monitor (VMM);	locating a second portion of a virtual machine monitor (VMM) in a second address space associated with the VMM; *the allocating is performed as the second address space is associated with the VMM*
locating a second portion of the VMM in the second address space;	
allocating a first address space for a guest operating system;	mapping a first portion of the VMM into a first address space and the second address space, the first address space being associated with a guest operating system; *the allocating is equivalent to the associating with a guest operating system*
mapping a first portion of the VMM into the first address space and the second address space;	
detecting that the guest operating system attempts to access a region occupied by the first portion of the VMM within the first address space;	detecting that the guest operating system attempts to access a region occupied by the first portion of the VMM within the first address space;
	if determining that no unused region exists within the first address space, selecting a random region within the first address space, copying content of a memory located at the random region to the second address space, re-mapping the first portion of the VMM into the

	random region, and accessing the copied content of the memory in the second address space if detecting an attempt of the guest operating system to access the content of the memory previously located at the random region; and
relocating the first portion of the VMM within the first address space **to allow the guest operating system to access the region previously occupied by the portion of the VMM.**	*periodically* relocating the first portion of the VMM within the first address space *until finding a region that is infrequently used.*

5.   The previous limitation of the present claim 1 makes it obvious that the guest operating

system has access to the first and second portions of the VMM within either the first or second

address spaces.

Claim 13. An apparatus comprising:	Claim 13. An apparatus comprising:
a first address space associated with a guest operating system;	a first address space associated with a guest operating system;
a second address space associated with a virtual monitor (VMM); and	a second address space associated with a virtual monitor (VMM); and
a virtual machine kernel to allocate the first address space for the guest operating system, to allocate the second address space for the VMM, **to map a first portion of the VMM into the first address space and the second address space,** *to locate a second portion of the VMM in the second address space,* **to detect that the** *guest operating system attempts to access a region occupied by the first portion of the VMM within the first address space* and to *relocate the first portion of the VMM within the first address space* to allow the guest operating system to access the region previously occupied by	a virtual machine kernel to *locate a second portion of the VMM in the second address space,* **to map a first portion of the VMM into the first address space and the second address space,** *to detect that the guest operating system attempts to access a region occupied by the first portion of the VMM within the first address space,* to determine that no unused region exists within the first address space, to select a random region within the first address space, to copy content of a memory located at the random region to the second address space, to re-map the first portion of the VMM into the random region, to

the first portion of the VMM.	access the copied content of the memory in the second address space if detecting an attempt of the guest operating system to access the content of the memory previously located at the random region, and to periodically *relocate the first portion of the VMM within the first address space* until finding a region that is infrequently used.

6.   The conflicting claim 13 contains all of the limitations of present claim 13 with portions

of the limitations being written in a different order.

Claim 25. A system comprising:	Claim 25. A system comprising:
a memory to include a first address space associated with a guest operating system and a second address space with a virtual machine monitor (VMM); and	a memory to include a first address space associated with a guest operating system and a second address space associated with a virtual machine monitor (VMM); and
a processor, coupled to the memory, to allocate the first address space for the guest operating system, to allocate the second address space for the VMM, *to map a first portion of the VMM into the first address space and the second address space*, to locate a second portion of the VMM in the second address space, **to detect that the guest operating system attempts to access a region occupied by the first portion of the VMM within the first address space** and to *relocate the first portion of the VMM within the first address space to allow the guest operating system to access the region previously occupied by the first portion of the VMM.*	a processor, coupled to the memory, to locate a second portion of the VMM in the second address space, *to map a first portion of the VMM into the first address space and the second address space*, **to detect that the guest operating system attempts to access a region occupied by the first portion of the VMM within the first address space**, to determine that no unused region exists within the first address space, to select a random region within the first address space, to copy content of a memory located at the random region to the second address space, to re-map the first portion of the VMM into the random region, to access the copied content of the memory in the second address space if detecting an attempt of the guest operating system to access the content of the memory previously located at the random region, and to periodically *relocate the first portion of the VMM within the first address*

> *space until finding a region that is infrequently used.*

7.   The conflicting claim 25 contains all of the limitations of present claim 13 with portions

of the limitations being written in a different order.

Claim 28. A computer readable medium that provides instructions, which when executed on a processor, cause said processor to perform operations comprising:

allocating a first address space for a guest operating system;

allocating a second address space for a virtual machine monitor (VMM);

mapping a first portion of the VMM into the first address space and the second address space;

locating a second portion of the VMM in to second address space; and

detecting that the guest operating system attempts to access a region occupied by the first portion of the VMM within the the first address space; and

Claim 28. A computer readable medium that provides instructions, which when executed on a processor, cause said processor to perform operations comprising:

the first address space being associated with a guest operating system;
the allocating is performed as the second address space is associated with the VMM

mapping a first portion of the VMM into a first address space and the second address space,

locating a second portion of the VMM into a second address space associated with the VMM;

detecting that the guest operating system attempts to access a region occupied by the first portion of the VMM within the first address space;

if determining that no unused region exists within the first address space, selecting a random region within the first address space, copying content of a memory located at the random region to the second address space, re-mapping the first portion of the VMM into the random region, and accessing the copied content of the memory in the second address space if detecting an attempt of the guest operating system to access the content of the memory previously located at the random region; and

relocating the first portion of the VMM within the first address space to allow the guest operating system to access the region previously occupied by the first portion of the VMM.	*periodically* relocating the first portion of the VMM within the first address space *until finding a region that is infrequently used.*

8.   The previous limitation of the present claim 28 makes it obvious that the guest operating

system has access to the first and second portions of the VMM within either the first or second

address spaces.

----

9.   Claims 1-30 provisionally rejected under the judicially created doctrine of obviousness-

type double patenting as being unpatentable over claims 1-30 of copending Application No.

10/676,737. Although the conflicting claims are not identical, they are not patentably distinct

from each other because the differences in claim language are minor including the accessing of

the guest operating system of the first and second address spaces. Only the independent claims

have been analyzed, however, this double patenting rejection applies to all the claims.

"A latter patent claim is not patentably distinct from an earlier patent claim if the latter

claim is obvious over, or **anticipated by**, the earlier claim. In re Longi, 759 F.2d at 896, 225

USPQ at 651 (affirming a holding of obvious-type double patenting because the claims at issue

were obvious over claims in four prior art patents); In re Berg, 140 F.3d at 1437, 46 USPQ2d at

1233 (Fed. Cir. 1998) (affirming a holding of obvious-type double patenting where a patent

application claim to a genus in anticipated by a patent claim to a species with that genus). ELI

LILLY AND COMPANY v BARR LABORATORIES, INC., United States Court of Appeals

for the Federal Circuit, ON PETITION FOR REHEARING EN BANC (DECIDED: May 30,

2001).

10.   Claims 1-30 reads over the art of record. Prior Art has not been applied.

Conclusion

11.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Reba I. Elmore, whose telephone number is (571) 272-4192. The

examiner can normally be reached on M-TH from 7:30am to 6:00pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the art unit supervisor

for AU 2187, Donald Sparks, can be reached for general questions concerning this application at

(571) 272-4201.   Additionally, the official fax phone number for the art unit is (703) 746-7239.

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the Tech Center central telephone number is (571) 272-2100.

Reba I. Elmore
Primary Patent Examiner
Art Unit 2187

April 16, 2005